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May
1954

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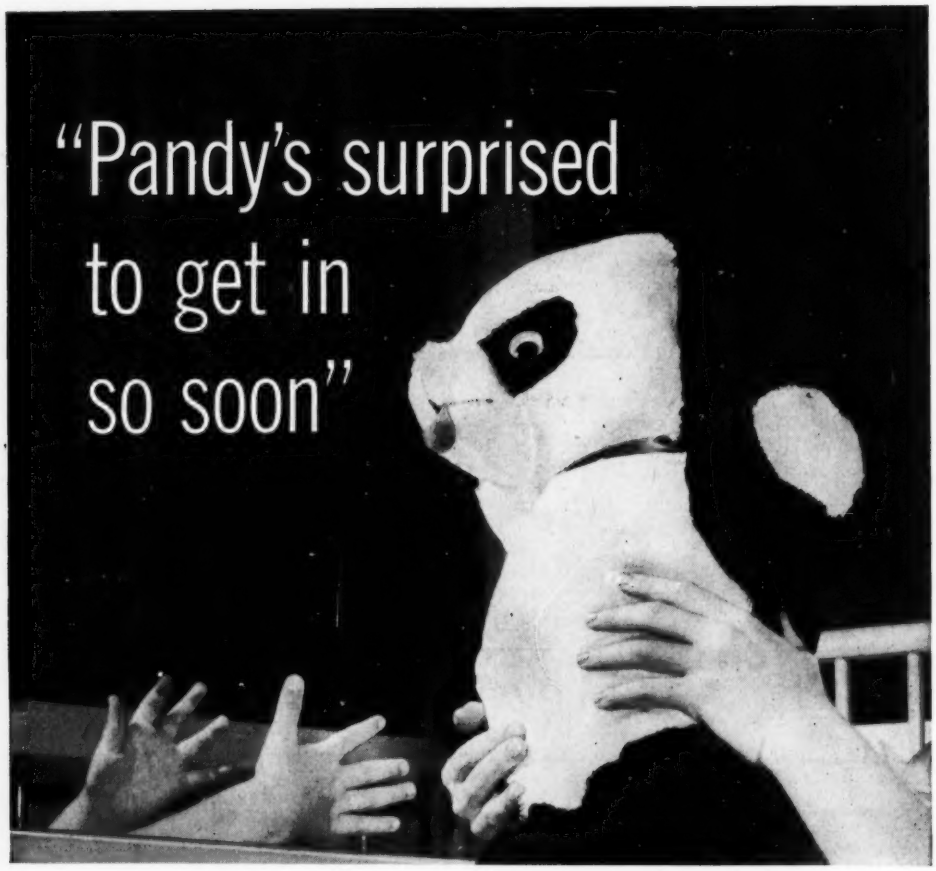

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New Mexico Medical Society's Seventy-Second Annual Session

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CURRY-ROOSEVELT COUNTY MEDICAL SOCIETY

•

Santa Fe, New Mexico

May 13, 14, 15, 1954

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LA FONDA HOTEL

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Lewis Thomas, M. D.....*Entertainment*
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Elmo Anderson, M. D.....*Luncheons*
Allen Haynes, M. D.....*Smoker*
George Prothro, M. D.....*Publicity*
Mrs. W. D. Dabbs.....*Women's Activities*

GENERAL INFORMATION

Convention Headquarters.....La Fonda

REGISTRATION DESK:

Fireplace Lounge:

Open May 12, from 5:00 — 9:00 P. M.
Open May 13, from 8:00 A. M. to 5:00 P. M.
Open May 14, from 8:00 A. M. to 5:00 P. M.

REGISTRATION FEE:

Members and guests.....$15.00
Auxiliary Members, Nurses, Medical Students, Residents and Interns may register without fee.

TECHNICAL EXHIBITS:

All Technical Exhibits will be located in the Santa Fe and Coronado Rooms, La Fonda.

SCIENTIFIC EXHIBITS:

All Scientific Exhibits will be located in the North Gallery, Museum of New Mexico.

HOBBY EXHIBITS:

All Hobby Exhibits will be located in the North Gallery, Museum of New Mexico.

MEETING PLACE FOR HOUSE OF DELEGATES:

May 13 Session will meet in St. Francis Auditorium, Art Gallery, Museum of New Mexico.
May 15 Session will meet in the New Mexican Room, La Fonda.

MEETING PLACE FOR SCIENTIFIC SESSIONS:

St. Francis Auditorium, Art Gallery, Museum of New Mexico.

GUEST SPEAKERS

WILLIAM DAMESHEK, M. D.....Boston, Massachusetts
Clinical Professor of Medicine, Tufts College of Medicine; Hematologist and Director of Blood Research Laboratory, New England Medical Center; Editor-in-Chief and Founder of BLOOD, The Journal of Hematology.

HARRY WILKINS, M. D.....Oklahoma City, Oklahoma
Professor of Surgery and Head of Department of Neurological Surgery, University of Oklahoma Medical School; President-Elect, Harvey Cushing Neurological Society; F. A. C. S. and is a Governor of a Neurosurgical group of the A. C. S.

CHARLES W. MAYO, M. D.....Rochester, Minnesota
Professor of Surgery, Mayo Foundation Graduate School, University of Minnesota; Head of a Section of General Surgery, Mayo Clinic.

CHARLES L. MARTIN, M. D.....Dallas, Texas
Professor of Radiology, Southwestern Medical College of University of Texas; President, American Roentgen Ray Society; Recipient of the Janeway Medal of the American Radium Society.

GORDON MEIKLEJOHN, M. D.....Denver, Colorado
Professor of Medicine, University of Colorado School of Medicine; Member, Army Influenza Commission and Armed Forces Epidemiological Board.

M. EDWARD DAVIS, M. D.....Chicago, Illinois
Professor of Obstetrics and Gynecology, University of Chicago; Obstetrician and Gynecologist, Chicago Lying-In Hospital; Editor, Fertility and Sterility Journal.

W. A. SODEMAN, M. D.....Columbia, Missouri
Professor and Chairman, Department of Medicine, University of Missouri, School of Medicine; Author of "Pathologic Physiology: Mechanisms of Disease."

ARILD E. HANSEN, M. D.....Galveston, Texas
Professor and Chairman, Department of Pediatrics, University of Texas School of Medicine, Galveston, Texas; Director, University of Texas Child Health Program.

WEDNESDAY, MAY 12, 1954

5:00 – 9:00 P. M.

Registration, Fireplace Lounge, La Fonda

12:30 P. M.

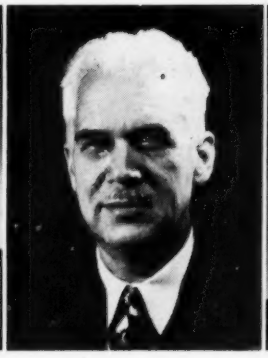
Luncheon Meeting of Board of Trustees, New Mexico Physicians' Service — Room 130, La Fonda

7:00 P. M.

Dinner Meeting of Council — Room 130, La Fonda

Dameshek

Davis


Hansen

Martin

THURSDAY, MAY 13, 1954
8:00 A. M. – 5:00 P. M.

Registration

8:30 A. M. – 11:30 A. M.

House of Delegates Meeting,
St. Francis Auditorium, Art Gallery Museum of New Mexico

12:00 M – 1:15 P. M.

Hugh T. Brasell, M. D., *Presiding*
General Round Table Luncheon,
New Mexican Room, La Fonda

THURSDAY AFTERNOON

Opening Ceremonies .....St. Francis Auditorium

1:30 – 2:15 P. M.

ALBERT S. LATHROP, M. D., *Presiding*
Retiring President, New Mexico Medical Society.

Invocation:	HENRY F. SEAMAN, *Rector* The Church of the Holy Faith
Welcome Address:	*Mayor*, City of Santa Fe
Welcome:	V. SCOTT JOHNSON, M. D., *President* Curry-Roosevelt County Medical Society
Presidential Address:	JOHN F. CONWAY, M. D., Clovis

SCIENTIFIC PROGRAM

ALBERT S. LATHROP, M. D., *Presiding*

2:15 – 2:55 P. M.

"SURGICAL LESIONS OF THE SMALL BOWEL AND THEIR TREATMENT."
Charles W. Mayo, M. D.....Rochester, Minnesota

2:55 – 3:35 P. M.

"DIAGNOSIS AND MANAGEMENT OF RHEUMATIC FEVER IN THE CHILDHOOD PERIOD."
Arild Hansen, M. D.....Galveston, Texas

3:35 – 4:15 P. M.

"THE TREATMENT OF CANCER OF THE MOUTH."
Charles L. Martin, M. D.....Dallas, Texas

4:15 – 4:55 P. M.

"THE CHANGING INDICATION FOR ABDOMINAL DELIVERY."
M. Edward Davis, M. D.....Chicago, Illinois

6:30 P. M.

BUFFET — SMOKER, La Posada
Courtesy — Curry-Roosevelt County Medical Society

FRIDAY MORNING
May 14, 1954

St. Francis Auditorium
JOHN F. CONWAY, M. D., Clovis, *Presiding*

9:00 – 9:40 A. M.

"PROBLEMS IN THE CHOICE OF ANTIBIOTICS IN THERAPY."
W. A. Sodeman, M. D.....Columbia, Missouri

9:40 – 10:20 A. M.

"SURGICAL INTRACRANIAL LESIONS: THE VALUE OF CLINICAL OBSERVATION IN DIAGNOSIS."
Harry Wilkins, M. D. .....Oklahoma City, Oklahoma

10:20 – 11:00 A. M.

"TREATMENT OF ANEMIA."
William Dameshek, M. D.....Boston, Massachusetts

11:00 – 11:40 A. M.

"THE TREATMENT OF CANCER OF THE UTERINE CERVIX."
Charles L. Martin, M. D.....Dallas, Texas

12:00 – 1:45 P. M.

ROUNDTABLE LUNCHEONS
Medical, Cantinada Room
JOHN DONNELLY, M. D., *Presiding*
Guest Speakers — Arild Hansen, M. D.,
W. A. Sodeman, M. D., William Dameshek, M. D.
Surgical, New Mexican Room
ALLEN HAYNES, M. D., *Presiding*
Guest Speakers — Harry Wilkins, M. D.,
Charles W. Mayo, M. D., M. Edward Davis, M. D.,
Charles L. Martin, M. D.

FRIDAY AFTERNOON
May 14, 1954

R. C. DERBYSHIRE, M. D., *Presiding*

1:45 – 2:30 P. M.

Visit Technical Exhibits — La Fonda

2:30 – 3:10 P. M.

"OFFICE AND HOSPITAL MANAGEMENT OF INFANTILE DIARRHEA."
Arild Hansen, M. D.....Galveston, Texas

3:10 – 3:50 P. M.

"THE TYPICAL AND ATYPICAL NEURALGIAS INVOLVING THE HEAD AND FACE."
Harry Wilkins, M. D.....Oklahoma City, Oklahoma

Mayo *Meiklejohn* *Sodeman* *Wilkins*

3:50 – 4:30 P. M.

"THE PURPURAS."
William Dameshek, M. D. ..... Boston, Massachusetts

4:30 – 5:10 P. M.

"PROBLEMS IN CHEMOTHERAPY."
Gordon Meiklejohn, M. D. ..... Denver, Colorado

6:30 P. M. – Social Hour

DINNER — DANCE, La Fonda
LES PEOPLES AND HIS BAND

SATURDAY MORNING
May 15, 1954

V. SCOTT JOHNSON, M. D., *Presiding*

9:00 – 9:40 A. M.

"DEVELOPMENTS IN THE VIRAL DISEASES."
Gordon Meiklejohn, M. D. ..... Denver, Colorado

9:40 – 10:20 A. M.

"SURGICAL LESIONS OF THE COLON AND THEIR TREATMENT."
Charles W. Mayo, M. D. ..... Rochester, Minnesota

10:20 – 11:00 A. M.

"THE MANAGEMENT OF THE STERILE COUPLE."
M. Edward Davis, M. D. ..... Chicago, Illinois

11:00 – 11:40 A. M.

"CHRONIC DIARRHEA."
W. A. Sodeman, M. D. ..... Columbia, Missouri

12:00 Noon

House of Delegates Luncheon and Meeting
New Mexican Room, La Fonda

OFFICERS', WOMEN'S AUXILIARY TO THE NEW MEXICO MEDICAL SOCIETY

1953 – 1954

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CONVENTION ARRANGEMENTS

The program for the Annual Meeting of the Auxiliary to the New Mexico Medical Society was prepared by the Auxiliary to the Curry-Roosevelt County Medical Society.

AUXILIARY PROGRAM

REGISTRATION:
May 12 — 5:00 to 9:00 P. M.
May 13 — 8:00 A. M. to 5:00 P. M.
May 14 — 8:00 A. M. to 5:00 P. M.

THURSDAY, MAY 13, 1954

MRS. LELAND S. EVANS, Retiring President, *Presiding*

2:00 P. M.

House of Delegates Meeting, La Posada Hotel

6:30 P. M.

Cocktail-Buffet, New Mexican Room, La Fonda

FRIDAY, MAY 14, 1954

MRS. A. C. ROOD, President, *Presiding*

12:30 P. M.

LUNCHEON — Bishop's Lodge
Business Meeting
Guest Speaker — Mrs. Frank Gastineay, Indianapolis
Chairman, American Medical Education Foundation, Auxiliary to the American Medical Association.

6:30 P. M.

Dinner — Dance — *Dress Optional*
(See Men's Program)

TECHNICAL EXHIBITS
Santa Fe and Coronado Rooms
La Fonda Hotel

We are fortunate again to have an excellent representation of Technical Exhibitors and remind all physicians that the exhibits are an important phase of the educational endeavor

(Continued on Page 218)

Aphorisms and Memorabilia Concerning the Gastro-Intestinal Tract

By Andrew M. Babey, M. D., Las Cruces, N. M.

1. "Patients with portal cirrhosis and ascites can be maintained indefinitely, without abdominal paracenteses, by rigid dietary sodium restriction with, if necessary, mercurial diuretics and ammonium chloride. Protein loss into the ascites ceases, the serum-albumin level rises, and the state of nutrition improves." *The Lancet*, Jan. 16, 1954, p. 130.

2. "Because of the frequency of symptoms of gall bladder disease following cholecystectomy, the 'new' or 'reformed' gall bladder deserves more attention than it receives. This condition, with stone or inflammation of a dilated cystic remnant, lends itself to roentgen study, often with definite results." Radiologic Maxims, *Miss. Valley Med. J.*, Jan. 1954, p. 62.

3. "Cholecystography in a patient with right upper quadrant pain despite a history of cholecystectomy has two advantages: (1) The history of cholecystectomy is sometimes erroneous and the focus of symptoms remains and may be visualized. (2) The remnant of the cystic duct (if cholecystectomy has been performed) may actually assume the function of the gall bladder, with its ability to store and concentrate bile. A cholecystogram therefore may reveal not only the functioning cystic duct remnant but also nonopaque calculi." Radiologic Maxims, *loc. cit.*, p. 62.

4. "The only way we know to immobilize the liver is by immobilizing the body. There is some evidence that activity does increase the load of work on the liver itself. There is also some clinical evidence that when patients are allowed activity prematurely they tend to have a recrudescence of their symptoms." *N. Y. Academy of Med.*, Panel Meeting, Jan. 1954, (A. J. Patek, Jr.) p. 44.

5. "As to the tests involved, if there are substantial changes in the serum proteins, in the albumin and globulin, or in cholesterol ester or prothrombin time in acute hepatitis, those changes generally indicate severe parenchymal damage. The flocculation and thymol tests indicate liver damage, I am sure, but they are perhaps so sensitive that they may persist in a positive state quite some time after the patient seems clinically fairly well off. So I think after those become stabilized, if the other tests are negative, one can allow the patient a degree of activity, even in the presence of say a two plus flocculation or a somewhat elevated thymol test." Panel Meeting, *loc. cit.*, p. 45.

6. "As far as cephalin flocculation and thymol turbidity are concerned, we have never paid the slightest attention to them in determining whether to get a patient out of bed or not, particularly the thymol turbidity which often remains elevated for a very long period of time." *N. Y. Academy of Med., loc. cit.*, (G. Klatskin) p. 47.

7. "Quite significant falls in hepatic circulation occur on the assumption of the erect posture and even more of a fall occurs with activity." *N. Y. Academy of Med., loc. cit.*, (W. Eisenmenger) p. 48.

8. "Since in hepatitis in accordance with the views of Himsworth anoxic areas already exist in the liver, one can readily visualize how excessive exertion may seriously alter the disease process." *N. Y. Academy of Med., loc. cit.*, p. 48.

9. "But we must not over-emphasize a single abnormal finding. Some people are made to lie in bed month after month because a flocculation test is positive or because there is a slight elevation of serum bilirubin. I think that we should let these patients up under very careful supervision while we challenge them with a battery of liver function tests and if there is no demonstrable worsening I think it is highly improbable that we are doing them harm. Indeed, the majority of patients who have eventually developed chronic hepatitis have been excellently handled, have been put to bed promptly with the first symptom of the disease and have been kept there for many months. From this evidence it does not seem that premature ambulation is the precipitating factor in causing continuation of the process." *N. Y. Academy of Med., loc. cit.*, (F. Hanger), p. 48.

10. "I think more and more of us feel that the patients who have the so-called alcoholic cirrhosis which seems to bear a much closer analogy to nutritional cirrhosis produced in experimental animals, tend to respond fairly well to diet rich in protein, whereas the results have been very disappointing in the patients who have primary biliary cirrhosis or post-necrotic, post-hepatitis cirrhosis in which the etiology has no

apparent relationship or primary relationship to nutrition." *N. Y. Academy of Med., loc. cit.*, (A. J. Patek), p. 49.

11. "I have seen more people who seemed to be harmed by the diets that doctors prescribed than actually helped by them. I think the emphasis should be placed on a diet that is adequate and well balanced. A physician who restricts the diet should be aware of the fact that his instructions may be followed for many years after he himself has forgotten about them. Many patients with chronic liver disease, placed on a low fat diet, become wasted and wan. Many patients tolerate fat well and improve dramatically when the fat is put back into the diet." *N. Y. Academy of Med., loc. cit.*, (M. A. Payne), p. 49.

12. "Sometimes a simple trick of reversing the hours of the day to fit the appetite of the sick patient is helpful. The beefsteak may be more acceptable for breakfast and the cornflakes for dinner." *N. Y. Academy of Med., loc. cit.*, p. 50.

13. "Our experience both in hepatitis and cirrhosis has been that patients who are not deeply jaundiced and who have some bile in their feces, seem to tolerate neutral fats very well. As in many other digestive disorders, they tolerate fried meats and other oxidized fats poorly. We have never attempted to restrict milk, eggs and cream or other unoxidized fats. Those seem to be well tolerated by them and make for more palatable diets. Also they make it possible to increase the total caloric intake." *N. Y. Academy of Med., loc. cit.*, (G. Klatskin), p. 50.

14. "We have come to use tube feeding more and more both in cirrhotics and in hepatitis patients and they do remarkably well. We have not employed a stiff rubber tube, but have used something called a Glenn tube, named after a local surgeon. It is nothing but a long Penrose drain which the patient swallows and is tolerated fairly well for weeks on end. In that way it is often possible to provide quite an adequate liquid diet which is high both in proteins and calories." *N. Y. Academy of Med., loc. cit.*, p. 50.

15. "The control of such ascites, even in the most refractory patient in its simplest consideration is merely the control of salt because if one just considers that in every liter of ascites there are eight to nine grams of sodium chloride, if those eight to nine grams are not provided to the patient he cannot form that liter of ascites. The average patient with refractory ascites will form on the average diet anywhere from one to one and one-half liters of ascites a day and this means the intake of approximately a third of an ounce of salt. If we can reduce the salt intake of a patient down to that which he loses by other than renal means, such as by the skin and fecal routes, which total approximately a half to one gram of salt a day, then there is just no sodium chloride left over for the production of ascites. Whether this works or not, one just has to find out. In most cases it does." *N. Y. Academy of Med., loc. cit.*, (W. J. Eisenmenger), p. 52.

16. "The question of toxicity of low salt diets always comes up, such as described by Schroeder as the low salt syndrome. It so happens that in patients with cirrhosis and ascites this actually is an infrequent complication. At least it is rarely aggravated by the degree of salt restriction that is required to control ascites. However, if in addition to a low salt diet one presses the use of mercurial diuretics, then one must be ever careful to prevent an extreme dilution of body sodium and eventual shock. This, fortunately, is a rare phenomenom." *N. Y. Academy of Med., loc. cit.*, p. 52.

17. "Later because of the obvious importance of protein and since we were probably fairly close to the borderline of adequacy, we supplemented the low salt diet with fairly large amounts of whole protein in the form of powdered substitutes such as protinal, which can readily be given to the extent of 120 grams a day, which means about 75 grams of protein a day with hardly any addition in the salt intake." *N. Y. Academy of Med., loc. cit.*, p. 52.

18. "Take for example a resin which has fairly good capacity when tested in vitro or even when tested in a normal subject who is on a normal salt intake. If that same resin is given to a patient who has cirrhosis and a strong tendency to form ascites it will do practically nothing. The reasons for this are not quite clear but there are several points which have come up in the past year which may give us some indication as to why the resins are so ineffective, just where you need them most. . . . perhaps there is an excessive amount of some adrenal salt active hormones which manifest themselves in the retention of sodium throughout the body, including retention or withdrawal of sodium from fecal contents, including the resin." *N. Y. Academy of Med., loc. cit.*, p. 53.

19. "The group in Boston showed that some of the ammonium resins released excessive amounts of ammonium which per-

haps contributed to the development of coma." *N. Y. Academy of Med., loc. cit.*, p. 53.

20. "I think there is general agreement that the evidence is not adequate to show that choline or methionine provides any additional benefit over that of the adequate, nutritious diet containing at least 70 to 100 grams of protein a day." *N. Y. Academy of Med., loc. cit.*, (A. J. Patek), p. 56.

21. "As to the indications for specific vitamin therapy: — there are changes in many of these patients, who may exhibit signs of deficiency of the B vitamins, such as polyneuritis or pellagra and their serum vitamin A may be quite low. However, unless they show stigmata of these deficiency diseases, I think there isn't much value in forcing high intakes of the specific vitamins. We are not at all certain whether the forcing of vitamins in large amount, especially in a state of imbalance, may do actual harm. Large doses of vitamin A have been shown to cause liver damage, for example." *N. Y. Academy of Med., loc. cit.*, p. 56.

22. "Human albumin is another substance which when it first became available was thought likely to be of great benefit to many patients because one of the defects manifested by a cirrhotic patient is a low level of serum albumin. For many years it was thought that the correction of this would reduce the ascites and would produce a diuresis. However, it is effective only in patients who are relatively easy to control by other methods." *N. Y. Academy of Med., loc. cit.*, (W. J. Eisenmenger), p. 58.

23. "Furthermore, having relatively little effect in this type of patient, there are also certain hazards which are commonly encountered in the form of hematemises as the result of the expansion of blood volume which is quite common, especially if intensive albumin therapy is given, such as several units daily." *N. Y. Academy of Med., loc. cit.*, p. 58.

24. "I think then I can speak for the whole panel in emphasizing that shock is a very serious complication and should be combated promptly by whole blood and by hypertonic glucose solutions, and by every device to restore blood pressure as soon as possible. Many cases of hepatic coma follow even slight blood loss with drop in blood pressure." *N. Y. Academy of Med., loc. cit.*, (Hanger), p. 59.

25. "While I don't believe that Aureomycin or any other antibiotic has any effect in the uncomplicated case of coma, they may be worth using as a prophylactic measure, because these patients are so debilitated that they are prone to serious infection which can occur without the usual high fever or leukocytosis." *N. Y .Academy of Med., loc. cit.*, (W. J. Eisenmenger), p. 60.

26. "We had occasion to try a series of hormones on a group of these patients and one was methyl testosterone, which generally should be avoided in patients with liver disease because frequently its use will cause an increase in the jaundice. However, in certain patients who for long periods prior to treatment had extreme degrees of jaundice and pruritus, methyl testosterone for some reason provided fairly dramatic relief. The relief is such that some of these patients refuse to discontinue the drug." *N. Y. Academy of Med., loc. cit.*, p. 62.

27. "I don't believe methyl testosterone is a cytotoxic agent but we continue to see patients on this drug develop deep jaundice with large bile plugs in the center of the lobule, but with very little parenchymal destruction. Why the intrahepatic inspissation of bile takes place in patients with methyl testosterone is a very interesting question which I certainly cannot explain. I rather suspect it represents a functional alteration and not true injury." *N. Y. Academy of Med., loc. cit.*, (A. Payne), p. 63.

28. "At the present time we use ACTH in patients who have severe hepatitis, who are quite ill and cannot eat, and we have yet to see a case that has not shown very significant improvement following its use. Whether this alters the course of the disease I am not prepared to say. We have serial biopsies in some of these patients and one can demonstrate a very remarkable disappearance of the exudate following therapy. We administer ACTH long enough so that the patients are usually close to recovery when it is discontinued. To be sure, such recovery might have been attained in any event, but the patients are very much better clinically during that period, and I am all in favor of continuing to use it in those very serious cases that may be going on to subacute necrosis and in those who are not eating or appear very sick." *N. Y. Academy of Med., loc. cit.*, (G. Klatskin), p. 64.

29. "The only patients whom I have seen benefitted by ACTH have been some of the type that Dr. Klatskin just described; patients who had acute, severe hepatitis and were going downhill steadily to the point of

(Continued on Page 211)

Femoral Head Replacement for Ununited Fractures of the Hip: A Solution to the Unsolved Fracture*

By Louis W. Breck, M. D., El Paso

Introduction: — The Problem

The principal purpose of this paper is to bring before those who read it the fact that there is a satisfactory answer to the problem of the ununited femoral neck fractures. Several times in the last two years the author has read the statement by orthopaedic surgeons to the effect that the unsolved fracture still exists; referring to fractures of the neck of the femur. This does not appear to be the case since at last a satisfactory reconstruction operation has been devised which will be the answer to the problem of non-union in most cases. There are many fractures in the body which are much less capable of solution than fractures of the neck of the femur at this time. By stating that the problem has been solved it would not be proper to mean that it can be solved in each individual case. The very old, the very debilitated, the case of severe cardiac decompensation, the previously grossly infected case, and some other unfortunate individuals may present insurmountable obstacles. However, it is not right to continue to regard these exceptional cases out of proportion to their importance. The great majority of fractures of the hip which have not turned out well as the result of the first treatment can be quite satisfactorily handled by means of a femoral head replacement if the right prosthesis is used and if it is used properly. A plea is being made to give these unfortunate old people with an unhealed hip fracture a chance to become ambulatory and self-sufficient again.

Fig. 1. *Ununited fracture of hip. Non-union of one year's duration. A previously inserted Smith-Petersen nail was removed six months before he reported to us when this roentgenogram was made.*

Glowing Articles

From time to time glowing articles are written about the percentage of union and the fine outcome in fractures of the neck of the femur. These articles are usually written by surgeons who have either had an exceptional run of good luck, who have selected their cases with great care, or by those who simply have a tendency to exaggerate the statistical results of their own work. The generally accepted percentage of union in femoral neck fractures is seventy-five per cent. This figure is probably high and if a large number of cases done by a large number of different surgeons is studied the percentage of non-union is probably greater than twenty-five per cent. This is hardly the place to go into a discussion of the causes of non-union but even in the hands of the most able orthopaedic surgeons in the country a considerable percentage of non-union results.

The problem of aseptic necrosis of the head of the femur in those fractures which have properly united remains a very unpleasant one indeed especially as far as the patient is concerned. Probably about twenty per cent of fractures of the femoral neck will go on to aseptic necrosis. Fortunately, however, the aseptically necrotic head of the femur may be replaced almost as easily as the head of the femur in cases where a non-union has occurred.

Ununited intertrochanteric fractures of

*Delivered as a talk before the El Paso County Medical Society February 23, 1954.

FIG. 2. *Same case as shown in Fig. 1. Fred Thompson vitallium prosthesis has been in place six months. Good function and minimal pain at this time and after a two year follow-up period.*

the hip although they do not lend themselves as well as femoral neck fractures to the technique, can be satisfactorily treated by means of excision of the head and neck and replacement by means of a prosthesis.

Description of the Prosthesis and its Advantages

The present paper will be devoted entirely to the Vitallium intramedullary prosthesis designed by Dr. Fred Thompson of New York City. This prosthesis consists of a femoral head, a short femoral neck, and a stem which projects from this and which is designed to extend down the medullary canal of the femur. The head comes in two sizes which are one and three-fourths inches in diameter and one and seven-eights inches in diameter. The author has never found it necessary to employ any other size. The shape of the prosthesis is so designed that the low end of the stem where it rests against the outer side of the medullary canal of the upper end of the femur is flat and broad so that pressure in this area is distributed over a large surface. The stem or intramedullary portion is gently curved as it leaves the neck portion of the prosthesis, this curve in general following out the angle between the neck and shaft of a normal femur.

Inert Material

The metal of which the prosthesis is made is Vitallium and it is the most inert material designed for use in bone surgery. In fact it can be regarded for all practical purposes as entirely inert. The author feels very strongly that Vitallium is far superior than any other material for use in femoral head prosthesis because of its extreme inertness and at the same time its extreme hardness and resistance to wearing.

I have had no experience with any other intramedullary prosthesis and since I am entirely pleased with the one I am using, my remarks in this paper will be limited entirely to the discussion of this apparatus and procedure. The apparatus is supplied in three types, a right, a left, and a universal. My own experience has been entirely limited to the universal type which works well. In view of this I can see no reason to employ the ones made for either the right or left side.

Indications

The indications for the use of this apparatus have already been pretty well stated but for purposes of emphasis and clarification they will be restated again.

Ununited fractures of the neck of the femur constitute the principal indication for the use of this apparatus and procedure. There is no reason why the unfortunate old person with an ununited femoral neck fracture must be committed to a life of invalidism either in bed, in a wheelchair, or on crutches. The pitiful picture of the old person who is entirely unable to get around or is able to get around only with great difficulty, can now be pretty well eradicated if this individual's disability is due to an ununited fracture of the femoral neck.

Aseptic necrosis of the head of the femur from any cause but usually resulting from a fracture of the neck of the femur in an older person, is another indication for femoral head replacement.

Intertrochanteric fractures can be treated generally by means of a femoral head replacement. However, there are certain cases in which it is not easy to use the prosthesis in intertrochanteric fractures and in some cases it is necessary to wait some months

for new bone to form in the region of the upper end of the femur before attempting a femoral head replacement.

Contraindication

The principal contraindication to this method of treatment is a patient who is not physically able to withstand a moderately large surgical procedure. Since this operation is not an emergency procedure we have taken the attitude that in most cases it is desirable to have an adequate evaluation by an internist or the patient's family doctor before advising the operation. In one instance I was very much surprised when a competent internist practically insisted that I do the operation on a patient 87 years of age. The patient's general physical condition was excellent and she was a spritely old lady with a clear mind. With some reluctance I did the procedure and was very pleased with the way the patient withstood the operation. This is simply an example of the situation where the calendar age alone does not constitute a contraindication to surgery. It is not advocated that a high percentage of patients with ununited fractures in their eighties be operated on and only carefully selected cases in the seventies and eighties should be done. However, it should again be emphasized that the majority of patients who are in reasonably good health and who have withstood a fracture which has gone on to non-union, can withstand an operation for replacing the head of the femur.

Technique

The incision to be used is optional. The author prefers the posterior incision of Gibson which is made with the patient lying on the side. However, a modified anterior incision has proved popular in the hands of many surgeons. A full anterior Smith-Petersen incision is not indicated and in fact is unnecessarily extensive and hard on the patient. The advantage of the posterior incison (Gibson) is that the operation can generally be done more rapidly with this incision and usually less blood is lost. However, it should be emphasized that the incision which the surgeon can use most dextrously is the one which should be used. Although time per se is not of prime importance it is quite desirable to keep the operative time down to a reasonable minimum. It is surprising how fast these procedures go and even with the somewhat tedious closure required in using a Gibson incision most of these cases can be finished in an hour and a half and many of them in much less time than that.

The question of the anaesthetic to be used is of some importance. The anaesthesiologists which have helped us have felt that a low spinal anaesthetic employing one of the safer anaesthetic agents is the best thing to use. We have agreed with this and been pleased with our results. Electrocoagulation is often helpful in quickly stopping whatever bleeding there is and with spinal anaesthesia no fear of explosion is present in using electrocoagulation.

FIG. 3. *This shows the prosthesis about to be inserted. The head of the femur has been removed and neck has been cut to the proper length and at the correct angle.*

Actual Technique

The actual technique of getting the head out and the prosthesis in is not very complicated. After the acetabulum and fracture site have been exposed the fracture can be cut through very easily with a knife or osteotome. The femoral head can then be pried out of the acetabulum with a dull periosteal elevator or some other simple instrument. In some instances the ligamentum teres will hold the femoral head in. It is almost always possible to slip a pair of scissors into the acetabulum and cut this ligament after which the head comes out easily. The base of the neck of the femur is then shaped carefully

FIG. 4. *The prosthesis is in place. It is intramedullary. The shoulder portion of the neck of the prosthesis rests on the patient's femoral neck.*

with a rongeur so that it will accept the base of the neck of the prosthesis at the proper angle. A large drill hole is then placed through the neck of the femur into the region of the medullary canal or just above its upper end in the trochanteric region. The special rasp manufactured by the makers of Vitallium, is then placed down this hole and worked up and down to shape the hole to receive the stem of the intramedullary prosthesis. After the shaping has been properly performed the stem of the prosthesis is inserted and the shoulder of the neck of the prosthesis should lie in smooth flat contact with the base of the neck of the femur. The prosthesis should fit loosely in the bone prepared to receive it. The head of the femoral head prosthesis is then reduced back into the acetabulum. In some instances at this point it will be found that there is too much shortening to allow this to be done easily. If this is the case more of the neck of the femur must be taken off. It should be mentioned that if there is a great deal of shortening in a case, strong skeletal traction should be applied for a week before the operation in order to gain sufficient length to put the prosthesis in the right place and get the head of the femur back in the acetabulum. It should be pointed out that it is usually necessary to accept some shortening. In trochanteric fractures it is often necessary to accept a considerable amount of shortening. This is not a major drawback to the procedure as these old people are seldom bothered by the shortening they have. The surgeon should be prepared to accept as much shortening as necessary to get a proper and moderately easy reduction of the head into the acetabulum.

Cautions

Several "don't" should be mentioned. Never drive the prosthesis into its hole with a mallet or shove it in with any appreciable force. This is apt to split the upper end of the femoral shaft and trochanteric region and create a very bad situation. Caution should be taken to make sure the stem of the prosthesis does not get out of the hole where a previous Smith-Petersen nail has been placed. With the Gibson incision it is not so easy to get confused as to this. With the anterior incision it is surprisingly easy to put the prosthesis in the wrong place. If there is the least doubt in the surgeon's mind an x-ray should be made on the operating table to see where the end of the prosthesis' stem is. The capsule in these cases should not be excised as this tends to produce a dislocation or subluxation later. The capsule may be opened freely. If it is necessary to separate a great deal of it this separation should occur away from the acetabulum where the capsule is attached to the neck and not at the acetabular margin.

Post-Operative Care

A few words should be said about the post-operative care of these patients. If the hip is at all unstable or the acetabulum at all shallow these patients should be put up in a pair of Jones' boots which consist of plaster casts from the toes to below the knee. These should be connected with a wide cross bar putting the legs up in marked abduction. The affected foot should be put up in slight internal rotation. If the reduction seems very adequate and very secure it is often possible to get along without any post-operative fixation at all. Usually, however, it is better to put the patients up in three or four pounds of adhesive tape traction with their affected leg in wide abduction. Putting the patient up in abduction adds additional security and tends to prevent subluxation. Instead of the Jones' boots a pair of patient's shoes connected with a

wide steel cross bar may be used. Abduction should be continued post-operatively for three weeks. At the end of three weeks the patient should be got out of bed and in a few days should be up and walking. Often several weeks are required in an invalid walker. Following this the patient can often walk with only a cane. Some judgment should be employed in the matter of allowing the patient to walk freely. If the base of the neck was quite soft or if there was an inadequate shoulder for receiving the base of the femoral neck of the prosthesis, more time should be allowed before the patient is allowed to walk freely. If on the other hand the junction point makes good base for the prosthesis to rest upon it is not unreasonable to let the patient begin walking shortly after the three weeks.

Conclusions

We have done a considerable number of these cases and have been very gratified with the results in them. Only two of the patients have not had a quite satisfactory result. In both of these the patients are happy with their results and are getting around. All of the rest of our patients have been tremendously improved over their previous state of non-union or aseptic necrosis of the head of the femur. A most important consideration is that their pain has been relieved to a large extent.

Again a plea is reiterated to those who come in contact with these unfortunate old people who have ununited fractures of the hip or aseptic necrosis of the femoral head. The plea is made to give them the opportunity to have a femoral head replacement which will give them a serviceable hip in most cases. This is in strong contrast to letting these unfortunate old people remain very severely crippled.

Summary

Ununited fractures of the hip and aseptic necrosis of the head of the femur can be very satisfactorily treated now and the fracture of the hip no longer remains the unsolved fracture.

A detailed description and discussion of the femoral head replacement and the operative technique is given.

Age per se is not a contraindication to surgery and a patient who is only a reasonably good risk is a satisfactory candidate for this operation.

The author's results in the specific operation employed have been very satisfactory. It is felt that the Fred Thompson intramedullary Vitallium prosthesis is considerably superior to any of the others for use in non-unions of the neck of the femur.

Aphorisms and Memorabilia . . .

(Continued from Page 206)

coma. I have seen three of these patients whose courses were reversed so soon after the start of ACTH that it appeared to be more than coincidental. However, one cannot be certain of such an effect until he sees many more cases. In the other types of liver disease, especially chronic liver disease, one doesn't see much happen at all. In patients with coma due to chronic liver disease, I have seen no beneficial effects." *N. Y. Academy of Med., loc. cit.*, (W. J. Eisenmenger), p. 65.

30. "We found that following the use of ACTH in certain patients with cirrhosis we had changes, very pronounced changes in several, in the blood coagulation time and with this the development of thromboses. In one the patient came to autopsy shortly afterwards and there was a large protal thrombosis which was estimated to have occurred at about the time when clinically it looked as though that had happened. We checked many of the other blood clotting factors and found no change in any of them; that is, one finds these pronounced changes in coagulation time to subnormal levels despite very deficient levels of prothrombin and fibrinogen and platelets which are characteristic of advanced cirrhosis." *N. Y. Academy of Med., loc. cit.*, p. 65.

31. "The other major hazard in the use of ACTH in patients with cirrhosis is the sudden expansion of the blood volume. If proper care isn't given to the control of salt intake in a patient who has varices, an esophageal hemorrhage can be precipitated by ACTH." *N. Y. Academy of Med., loc. cit.*, p. 65.

32. ". . . . . But we wish to draw attention to an early symptom which appears so far to have escaped general recognition. It is the inane civility which some cirrhotic patients exhibit before the actual phase of coma develops. We have come to the regretable though comforting conclusion that the choleric temperament, when present in patients with cirrhosis, is evidence of relatively stable though defective liver function, whereas a change to repetitive politeness or pointless agreeability should be regarded as a symptom of incipient coma and therefore viewed with grave suspicion." *The Lancet*, Feb. 6, 1954, p. 284.

PROCEEDINGS OF THE NEW ENGLAND CARDIOVASCULAR SOCIETY

Fibrinolysis in Normal and Pathologic Conditions*

By Mario Stefanini, M. D.,** New England Center Hospital, Boston

The purpose of this presentation is that of discussing some work recently conducted on three aspects of the physiopathology of the fibrinolytic system:

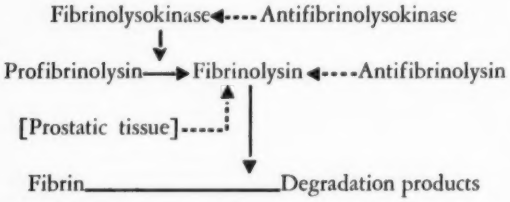
A. The nature and control of fibrinolysis,

B. The role of fibrinolysis in some hemorrhagic diseases,

C. The role of fibrinolysis in thromboembolism and attempts to activate fibrinolysis in vivo.

There exists in the circulating human blood a system potentially able to destroy the clot formed at the site of vascular injury following trauma. The system consists of a proenzyme (pro-fibrinolysin), activator(s) (found in tissue extracts) and an active enzyme (fibrinolysin). Both the activation and action of fibrinolysin are antagonized by inhibitors (antifibrinolysokinase; antifibrinolysin) (Figure 1).

FIGURE 1: The fibrinolytic system



The balance of activators and inhibitors, fibrinolysin and antifibrinolysin is very delicate but well controlled "in vivo." Practically no lysis of the clot is observed under normal conditions, although fibrinolysin may be demonstrated to develop during blood coagulation, but is promptly inactivated by antifibrinolysin. Recent work seems to indicate that the control of the fibrinolysin-antifibrinolysin equilibrium is under the influence of the pituitary-adrenal axis, the spleen acting as a mediator in a poorly understood manner.

Activation of fibrinolysin "in vivo" occurs when tissular material (kinases) gain entrance into the circulation and, less likely, through other mechanisms. Uterus and lungs are particularly rich in kinase and pulmonary surgery and obstetrical emergencies are prominent among conditions in which fibrinolysis is noted, and severe bleeding ensues. Transfusion reactions, severe trauma, burns, etc., are also accompanied by fibrinolysin. Bleeding, in all these cases, is due to proteolysis of fibrin and fibrinogen. Other coagulation proteins (prothrombin, labile component, stable component, etc.) are often equally affected. A condition of great interest is represented by the hemorrhagic diathesis which accompanies premature separation of placenta. The severe defibrination which is typical of this syndrome probably recognizes several mechanisms: (a) activation of fibrinolysis due to entrance of uterine tissue extract in the circulation; (b) intravascular coagulation with consequent severe hypofibrinogenemia due to entrance of thromboplastic, amniotic material in the circulation, and, less likely; (c) a fibrinogenemia due to arrest of production of fibrinogen from the liver. Another interesting situation is that found in carcinoma of the prostate with extensive dissemination. An excess of a proteolytic enzyme produced by prostatic tissue causes severe destruction of fibrinogen, fibrin and other coagulation proteins. There is no doubt that fibrinolysis is responsible for bleeding more frequently than it is commonly recognized, as we have shown with delicate methods for the detection of the minimal amount of clot lysis, which have been developed in this Laboratory. It is of some interest that the administration of ACTH and Cortisone may reduce either the activation or the very activity of fibrinolysin.

Evidence of a possible role of the fibrinolytic system in the pathogenesis of thromboembolism is supplied by the observation that the antifibrinolysin titer is increased in thromboembolic disease. More interesting is the possibility of utilizing activation of fibrinolysin to dissolve clots formed within the circulation. For this purpose, we have used the intravenous administration of streptokinase, a bacterial extract which activates fibrinolysin. A method has been developed to determine "in vitro" the amount of streptokinase needed to activate fibrinolysin optimally. The intravenous administration of purified preparations of streptokinase is feasible and safe. Prolonged administration permits the maintenance of a level of fibrinolysis which is (a) effective by "in vitro" tests; (b) capable of dissolving clots and thrombi produced experimentally in the animal. Evaluation of this agent in the therapy of thromboembolism in man is being pursued at present.

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**Established Investigator, American Heart Association.

PROCEEDINGS OF THE NEW ENGLAND CARDIOVASCULAR SOCIETY

The Electrocardiogram in Potassium Depletion: its Relation to Serum Concentration and Potassium Balance

By William B. Schwartz, M. D., Harold D. Levine, M. D., and Arnold S. Relman, M. D., New England Medical Center, Boston

The correlation between the electrocardiogram, the potassium balance and the serum potassium concentration was analyzed in fourteen balance studies on eleven subjects with varying degrees of potassium depletion resulting from diarrhea, or from the administration of DOCA, Compound F, or acidifying salts.

In only half the observations on subjects depleted of 40 to 550 mEq. of potassium did the electrocardiogram show evidence of potassium deficiency. The changes which occurred were not quantitatively related to the potassium balance or to the serum concentration. There was sometimes a lag of one or more days in the electrocardiographic response to acute loss or retention of potassium. Only in the Compound F subjects were there significant losses of nitrogen, and in these cases the uncorrected potassium balance was better correlated with the electrocardiogram than was the balance corrected for nitrogen. None of the subjects with acidosis developed electrocardiographic evidences of potassium depletion.

It is concluded that the electrocardiogram in potassium depletion is consistently related neither to potassium balance nor to serum potassium concentration and that it cannot be relied upon as a guide in the diagnosis or therapy of this condition. No conclusions can be drawn about the relationship of the electrocardiogram to intramyocardial potassium concentration.

A Method for Gradual Occlusion of the Internal Carotid Artery in the Treatment of Aneurysm

By Bertram Selverstone, M. D., and James C. White, M. D.
New England Medical Center, Boston

Ligation of the internal carotid artery is a procedure of therapeutic or prophylactic value in certain patients with intracranial arterial aneurysms, arteriovenous fistulae, and other major vascular malformations. Since a number of patients, especially those over 50 years, develop hemiplegia, hemiparesis, or other untoward neurologic signs after carotid ligation, it was considered desirable to determine whether gradual occlusion of the vessel over a period of several days would be advantageous. Accordingly, a stainless steel clamp has been devised which permits the internal carotid artery to be gradually occluded over a period of several days. Its emerging stem can then be removed without the necessity for a second operation, permitting the clamp itself to remain permanently in place. During the period of gradual occlusion blood flow can be increased at any time should partial occlusion cease to be tolerated. Details of the clamp, its method of application, and removal of the stem are demonstrated by means of lantern slides. Clinical histories are presented which illustrate the use of the clamp in the treatment of each of the conditions noted above. In two of the three patients described, attempts at immediate total ligation had not been tolerated whereas gradual occlusion was possible without neurologic sequelae. Carotid pressure tracings are presented, illustrating the effect of the clamp. Possible complications of its use are described together with methods for their prevention.

Texas Post-Graduate School Will Open In El Paso

The first teaching session of the recently-established El Paso branch of the University of Texas Post-graduate School of Medicine will be held in El Paso June 13 at Providence Memorial Hospital.

Heart disease will be the subject of the session, which will start at 8:30 a. m. The Texas Chapter of the American Academy of General Practice will give an eight hour credit for the course.

Monthly Clinical Pathological Conference of El Paso General Hospital

FREDERICK P. BORNSTEIN, M. D., EDITOR

CASE NO. A-237

PRESENTATION OF CASE BY DR. H. P. BORGESON

Present Complaint:

This 59 year old woman was admitted January 6, 1954 with presenting complaints of abdominal pain, abdominal swelling and vomiting for three weeks.

Past History:

Eighteen years ago the patient had a left radical mastectomy for carcinoma of the breast. She received post-operative radiation.

Present Illness:

Four years ago patient first noted abdominal pain and abdominal swelling accompanied by diarrhea. She apparently recovered spontaneously. One year ago the patient had a recurrence of the abdominal pain and swelling accompanied by jaundice and vomiting. Two months prior to admission the pain and abdominal swelling recurred without jaundice and have continued to admission. Patient noted that her stools were very light. She had anorexia, headache, and moderate edema of the feet and ankles. She did not have dyspnea, orthopnea, hematemesis, melena or diarrhea. Patient had been treated for approximately one year with Digitalis, Ammonium chloride, Mercuhydrin, Aminophylline, vasodilators and a low salt diet. She was referred to the hospital when she failed to improve under treatment.

Systems Review

Positive findings are noted in the present illness.

General:
No weight loss.

Ears:
Chronic draining otitis media right for three years.

Cardiovascular:
Hypertension discovered one year ago.

Female Reproductive:
Amenorrhea since 1936 (date of post-operative radiation).

Family History:

No familial or chronic contagious diseases.

Physical Examination:

Temperature 98.6, Pulse 90, Respirations 20, Blood Pressure 200/100. Weight approximately 150. Patient is a well oriented, alert white female with no acute distress.

Skin:	No gross jaundice demonstrated.
Head:	Pupils and EOM negative. Opthalmoscopic examination shows moderate narrowing of the arteries. Some arterio-venous nicking. No other abnormalities.
Ears:	Right drum perforation with small amount of cloudy discoloration. Left drum scarred but intact.
Nose, mouth and throat:	No lesions or inflammation.
Neck:	No apparent masses.
Lymphnodes:	No axillary, neck, or inguinal nodes noted.
Chest:	Respirations normal without distress.
Breast:	Left breast and anterior chest muscles are absent. There is a scar running into the axilla from the anterior chest.
Heart:	Enlarged to the left apex in the sixth intercostal space of the axillary line. A short systolic murmur is heard at the apex.
Lungs:	Wheezes and rales are heard bilaterally in the bases.
Abdomen:	Distended, dull to percussion with a very large fluid wave. The liver is enlarged 4 to 5 cm. by percussion.
Female genitalia:	Senile atrophy of the vagina. No lesion of cervix. Bimanual examination was not satisfactory because of the large amount of fluid. Additional examinations failed to demonstrate any lesion or mass in the pelvis.
Bones, Joints and muscles:	No abnormalities.
Extremities:	One plus edema of the ankles bilaterally. The lower legs show scars of healed ulcerations.

Neurological Examination: Deep tendon reflexes, sensitivity and coordination are not remarkable.

Laboratory Findings on Admission:

CBC: RBC 4.29
Hb. 13.4
WBC 6,000
Diff. — Segs. 58, Lymphs 33, Monos 0.

Urinalysis: Specific Gravity 1.014
Albumin 1+
Sugar trace
WBC 2-3/HPF
RBC 1-2/HPF
Urobilinogen — Positive

Blood Chemistry: Van den Bergh —
Direct 0.25 Mg. %
Indirect 0.53 Mg. %
Cephalin Cholesterol
Flocculation —
24 hrs. 0
48 hrs. 1+
Total Protein — 5.1
Albumin 2.6
Globulin 2.5
Prothrobin —
Time 100%
Serology — Doubtful, not repeated.

Laboratory Findings for 1-24-54:

CBC: RBC 4.25
Hb. 12.7 gms.
WBC 28,150
Diff. — Stabs 1, Segs 78, Lymphs 18, Monos 2.

Urinalysis: Specific Gravity — 1.025
Albumin — Trace
Sugar — Negative
WBC — Many

BUN — 43 mg. %
Total Protein — 5.0
Albumin — 2.3 and Globulin — 2.7.
BSP — 70% retained in 45 min.
Alkaline Phosphatase — 1.4 units.
Icterus Index — 20
Protein Bound Iodine — 6.3 micrograms.

Laboratory Findings for 2-2-54:

Urinalysis: Albumin — trace.
Sugar — Negative
WBC — 5-8/HPF
RBC — Many

CBC: RBC — 3.96
WBC — 12.950
Hb. — 13.8 gms.
Diff. — Segs 83, Lymphs 11, Monos 6.

Tissue Report: Paracentesis fluid negative for tumor cells.

X-Ray: Chest negative for metastases or congestive failure.
Abdomen negative for evidence of opaque calculi.
Barium Enema — Diverticulum of colon. No evidence of malignancy.

Course in the Hospital:

Patient on admission was not jaundiced, but developed jaundice after approximately two weeks. Her ascites persisted despite repeated paracenteses. The fluid was clear, straw colored. Her liver could no longer be felt by palpation. For the last week before death she was comatose and during the last two days developed diffuse subcutaneous and rectal hemorrhages. Just before death she developed generalized convulsions. Her eyes were pulled to the right. Her blood pressure dropped despite vasoconstrictors. No neorological changes were noted during the last week. Patient ran a fever of about 100 degrees for the last four to five days.

Patient received the following during her entire hospitalization:

Digitalis, Mercuhydrin, and ammonium chloride.

The following were given as a terminal therapy: Vitamin K and penicillin.

The patient expired on February 10, 1954, one month after admission.

Discussion of X-Ray by Dr. C. C. McVaugh:

I differ a little bit with this protocol. I believe this chest shows a definite pulmonary congestion. There is a left cardiac hypertrophy and widening of the thoracic aorta but there is a definite cardiac decompensation associated with the cardiac enlargement. I believe it looks like a hypertensive cardiovascular affair. I do not see any evidence of metastases just as reported here on the protocol.

Abdomen: There is nothing visible on the film and that is significant, in that you cannot distinguish liver, spleen, psoas muscles, etc., which I think is indicative of fluid in the abdomen. It has an overall uniform haziness. I notice that the protocol records a large liver three or four finger breadths below the costal margin, however, I cannot identify the liver in the abdomen at all which is probably due to an ascites.

Question by Doctor Carter. Will you please discuss the spleen. Dr. McVaugh: I cannot identify the spleen because the chest films are too light for abdominal organs and I cannot identify the spleen on either of the films. Perhaps on this one the kidney shadows are

faintly seen. I see no evidence of metastases in the visible skeletal structures.

Barium Enema: The barium enema records a diverticulum of the colon. It does show on the spot film taken here. I don't know if it is important at all. There are a number of small diverticula here. Otherwise, I do not see any evidence of organic lesions in the large bowel other than the diverticulum. I believe the colon appears to be negative.

The findings as far as X-ray is concerned are principally that of a congestive failure with ascites.

Differential Diagnosis by Dr. W. I. Coldwell:

In this case, one must first consider the various causes of ascites, since the patient obviously has fluid in abdomen. In the first place, we must consider cardiovascular disease. In favor of this, as stated by Dr. McVaugh, is the fact that the patient has cardiac enlargement. She has congestive heart failure. The blood pressure is elevated. There is slight edema of the ankles. Against that diagnosis as being the primary cause of the patient's ascites and other disease, is the fact that the patient is stated to be in no acute distress. It seems that a patient who is in that severe state of congestive heart failure would be dyspneic, would have some orthopnea, etc., which this patient does not have. The eye grounds are stated to show hypertensive vascular change which would coincide with the diagnosis of hypertension. There are basal rales noted and wheezes. I do not know if the patient had asthma, but at least it states that she had asthmatic type breathing. Another point in favor of cardiovascular disease is the form of treatment that she received prior to and during her hospitalization: Digitalis, Ammonium chloride, Mercuhydrin, Aminophyllin and low salt diet. No mention is made of any other form of treatment. In the laboratory findings, to substantiate a diagnosis of cardiovascular-renal disease is the presence of albuminuria. The fact is that there is blood in the urine and that there is a low serum albumin which might be caused by primary renal disease or renal vascular disease. However, there is one note of a specific gravity of 1.025, good concentration, which on a routine specimen would certainly be against any marked renal disease. There is no mention made of an EKG which would be of some help in the diagnosis of cardiac disease. The pulse rate is 90. It is not stated whether it is regular or irregular, however, we assume that it must be regular. I think this patient did have hypertensive cardiovascular disease with cardiac decompensation, but I do not think that that is the primary cause of death.

Second Place

In the second place one thinks of the gastro-intestinal tract and first of malignant disease. The patient had a carcinoma of the breast about eighteen years before her present illness began which seems a rather long interval before metastatic disease would develop. She does not have evidence of weight loss, apparently no cachexia and no other signs of long standing malignancy in the abdomen. There is no evidence of tumor cells in the ascitic fluid. There are no nodes present. The liver is stated to be enlarged at the original examination. I assume that examination was done following a paracentesis because I find it rather difficult to percuss the liver with a large amount of fluid in the abdomen. The fact that the liver did recede in size, if we were to believe the protocol, would certainly be against metastatic disease in the liver. It is not stated whether the liver is smooth or what the surface is like. The lack of nodularity is against malignant disease. The symptoms of the present illness date back four years which would be a long time without other evidence of malignant disease. The blood count is relatively normal; again that is against malignancy. It would have been interesting to have had an upper gastro-intestinal X-ray to determine whether there is any primary disease, or an extrinsic mass particularly as to widening of the duodenal loop indicating pancreatic disease.

The pelvis is stated as being negative which certainly is against a primary pelvic malignancy with peritoneal implants. So to get the diagnosis of this case one must go on to the non-malignant disease of the abdomen.

Various Causes

Although there are factors against it, the various causes of portal hypertension must be considered primarily in this patient's diagnosis. The causes of portal hypertension are those of either intrahepatic or extrahepatic disease. Intrahepatic disease is almost entirely cirrhosis of the liver. The extrahepatic causes may be many. There may be tumors, malignant or otherwise, compressing the portal radicle, inflammatory processes of various types, granulomas, thromboses, and the disease may arise in the venous wall itself. We had a case here some time ago of Chiari's Syndrome. However, I don't think Fred would give us another one of those.

It is possible that this patient could have had a phlebosclerotic condition. Syphilis is

a possible cause of phlebitis in the portal veins. This patient had a doubtful blood serology. It is reported that it was not repeated; if she had syphilis that would be a possibility. Various blood dyscrasias notably polycythemia vera may cause spontaneous vascular blockage and this may be either in the hepatic veins or in the portal veins. A rare possibility would be vascular change as the result of radiation therapy. The patient is stated to have had amenorrhea since the date of radiation. She must have had radiation somewhere except over the breast area.

Diarrhea

The patient had diarrhea. She had an intermittent history of disease with some jaundice intermittently. She had apparently intermittent ascites. She had pain, gastrointestinal symptoms of vomiting, nausea, etc. It is not stated whether stool examinations were made. I think that they probably should have been. There is a possibility of amebiasis with an amebic hepatitis, a smoldering process that recurs from time to time which might possibly lead to fibrosis and permanent change in the liver.

Against the diagnosis of portal hypertension, this patient had no melena, no hematemesis and no evidence of esophageal varices or splenomegaly. At lease no mention was made of the latter. However, those findings aren't completely necessary to make the diagnosis of portal obstruction. Another thing that one would consider in this case would be disease of the pancreas. It is possible to get chronic relapsing pancreatitis which could give a history of intermittent abdominal symptoms as this patient has had. It could cause obstructive jaundice and certainly can cause portal obstruction but not commonly.

Protocol

In looking over the protocol there are several things that come to mind. In the laboratory findings in favor of parenchymal liver disease is the fact that the total protein is slightly decreased, especially the albumin, on two occasions. There is no mention made of whether there is bile in the urine. The color of the urine is not stated. The Van den Bergh is normal on admission. Later the icteric index was definitely elevated. The prothrombin time is normal which is against rather widespread liver disease. The BSP test in the presence of jaundice is rather unreliable, however, a 70 per cent retention certainly favors marked liver damage. The cephalin flocculation is normal which is against liver damage. The alkaline phosphatase being normal is quite strongly against obstructive jaundice. Why the protein bound iodine was done I don't know but it is normal. The patient evidently has some renal disease. She has albuminuria persistently. She had many white blood cells in the second specimen. She has an increased white blood count probably secondary to pyelonephritis. She has on the last urinalysis red cells and very few white cells. She had nitrogen retention as evidenced by the BUN of 43 mg. per cent. There are enough findings in this case to state that this patient had parenchymal liver disease. I believe that she had cirrhosis of the liver as a primary diagnosis. I think that there may have been recurrent episodes of acute hepatitis. The liver was enlarged at the first examination and it was due possibly to a combination of chronic passive congestion on the basis of cardiac decompensation plus some fatty infiltration. The liver is stated to be not enlarged at a later examination. I think that she also had hypertensive cardiovascular disease and pyelonephritis. From the terminal history it would sound as though she died in liver coma probably also in uremia, with uremic colitis as well as hypoprothrombinemia secondary to widespread liver damage causing the rectal hemorrhage.

Dr. Celso C. Stapp:

The question of amenorrhea on this patient came up. I would just like to state that she did have radiation over her ovaries due to the fact of the malignancy of the breast. That is considered as good procedure.

Dr. Branch Craige:

Dr. Coldwell has covered this discussion very adequately and I agree with his conclusions. One possibility remains, however, that the woman might have had a recurrence of a carcinoma of the breast, because those carcinomas do occur sometimes very late. However, the fact that she has apparently made spontaneous recoveries from two or three relapses within the last four years lends support to the diagnosis of cirrhosis of the liver as a primary diagnosis.

Dr. J. C. Carter:

Dr. Coldwell covered the field very well. I think the laboratory data was very misleading, but from the history and her terminal condition, my guess would be that she had cirrhosis following viral hepatitis about a year or two ago and terminally she had a massive necrosis with acute uropathy.

Dr. C. E. Webb:

I was wondering about the cephalin flocculation being normal which apparently it is or relatively so, only 1 per cent in 48 hours. I don't believe that malignancy enters into

it and the only possible surgical thing is the possibility of associated gall stones which may account for some of the pain and increase in white count.

Clinical Diagnosis:

1. Metastatic carcinoma of the liver.
2. Hypertensive heart disease.

Dr. William I. Coldwell's Diagnosis:

1. Cirrhosis of the liver.
2. Chronic pyelonephritis.
3. Hypertensive heart disease.

Anatomical Diagnosis:

1. Cirrhosis of the liver, Laennec's type with ascites, icterus and multiple petechial hemorrhages.
2. Chronic pyelonephritis.
3. Surgical absence of left breast.

Dr. Frederick P. Bornstein:

After Dr. Coldwell's excellent discussion the autopsy findings should not hold much of a surprise for anybody. The external examination showed the body of a well developed, well nourished, elderly woman. The skin was markedly icteric and showed a great number of petechial hemorrhages. The left breast was missing and there was an old healed scar. Upon opening about 500 cc. of fluid was removed from the peritoneal cavity. The peritoneum was smooth, glistening and no tumor nodules were present. The organs of the thorax did not show any significant gross abnormalities. Surprisingly enough the heart was of approximately normal size. The liver weighed 1090 grams. The liver was of extremely firm consistency. The surface showed the typical hob-nailed appearance of Laennec's cirrhosis. As a matter of fact the appearance was so typical that I did not even find it necessary to photograph it. The liver cut with increased resistence. On cut section the normal hepatic pattern had disappeared. Instead there were irregular pale gray and yellow nodules separated from each other by bands of fibro-connective tissue. The pancreas showed a few areas of fatty necrosis. The kidneys showed considerable difference in size, the left being much larger than the right and on stripping the capsule numerous pitted scars were noted. Also present were a few small infarctions in the renal cortex.

The microscopic examination of the liver again showed the classical pattern of Laennec's cirrhosis. The kidney in addition to the small infarction showed the changes of chronic pyelonephritis. Careful search failed to reveal the presence of any metastatic lesions.

Some Survive

In concluding this case a few things deserve mention. First, in spite of the pessimistic outlook found in many articles in the literature, it shows that some people do survive their carcinoma and die much later of unrelated diseases.

In evaluation of this case I did cytology studies on the peritoneal fluid which were negative for tumor cells. In my experience pleural and abdominal fluids have given consistently the most reliable results on cytological examination, compared to material from other sources. It is especially important in this connection that all the fluid removed be sent to the laboratory because the more cells that are available for study the more accurate the diagnosis will be.

From the morphological standpoint it is noteworthy that the liver showed a very marked regenerative activity here. This is interesting because there is close relationship between carcinoma of the liver and cirrhosis, inasmuch as a great percentage of carcinomas of the liver arise in livers with cirrhotic changes.

In summarizing then we have a case of a 59 year old woman who fourteen years after a radical mastectomy started to develop ascites and had attacks of jaundice and died four years later of cirrhosis of the liver unrelated to the previous carcinoma.

New Mexico Medical...

(Continued from Page 203)

that underlies our meetings. Please use every opportunity to view the technical exhibits, and to become acquainted with the nice people in charge of them.

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Clinical Notes From Grand Rounds

These notes are abstracts of opinions expressed by staff members during case presentations at the Medical Grand Rounds of the Pratt Diagnostic Clinic, Boston.

Staphylococcal enteritis is an increasingly common complication following therapy of other infectious diseases with broad spectrum antibiotics such as oxytetracycline (Terramycin), chlortetracycline (Aureomycin), and chloramphenicol (Chloromycetin). Its increasing frequency is due to the fact that many staphylococci are resistant to these antibiotics. In mild cases there may be no more than a little diarrhea that subsides spontaneously; some cases, however, are quite severe and exhibit chills, fever, toxemia, septicemia, and multiple liver abscesses. The diagnosis is established by making a direct gram stain on the stool and noting numerous leukocytes and clumps of staphylococci. Stool cultures on blood agar may be positive, but may become overgrown with other organisms such as proteus vulgaris. Fortunately, at present, most staphylococci are sensitive to erythromycin and some to streptomycin, so that if the condition is recognized, prompt treatment with them can cure the disorder. If unrecognized and untreated, death may ensue.

* * *

The enthusiasm for sulfonamides and antibiotics as means of combating infection has caused some older but worthwhile methods of anti-infectious therapy to be all but forgotten. Mandelic acid is such an agent and in enterococcal infections of the urinary tract, which as a rule are resistant to newer types of therapy, mandelic acid is the therapeutic agent of choice.

* * *

In children with myxedema or in adults with myxedema of long standing, the blood cholesterol may be normal instead of being elevated as in the usual case of myxedema.

* * *

In myxedema the reflexes are characterized by fast contraction and slow relaxation.

* * *

In chronic respiratory failure due to chronic bronchitis, bronchial asthma, pulmonary fibrosis, and emphysema, right-sided heart failure (cor pulmonale) may occur. The congestive phenomena are apt to prove quite resistant to the usual forms of therapy with digitalis, mercurial diuretics, and salt restriction. The administration of ammonium chloride may make the patient worse because of aggravation of existing respiratory acidosis. The administration of oxygen may lead to mental confusion and coma because respiration has become dependent upon the stimulus of lowered oxygen tension in arterial blood rather than upon accumulation of carbon dioxide. Artificial respiration, positive pressure breathing, or use of a respirator may become necessary. Treatment requires that smoking be discontinued, bronchodilators be intensively used, and that respiratory acidosis and hypochloremia be corrected. A new diuretic agent, "Diamox," has been found to be especially useful in the control of this situation. It enhances the elimination of sodium and bicarbonate in the urine and thus promotes loss of fluid and retention of chloride. Large doses of Diamox may cause drowsiness and diminished gastric secretion but in small doses no serious side effects have been noted.

* * *

Myasthenia gravis may produce a localized or diffuse weakness and fatigability of muscle. If it is localized, the extraocular muscles are most frequently involved; bulbar (face, pharynx, larynx, and jaw) muscles are involved next in order of frequency. Fatigability of the lids may be brought out by causing the patient to look steadily upward for several minutes. The typical myasthenic facies is one in which the brow is constantly wrinkled, a result of attemting to keep the eyes open, and the typical myasthenic voice has a nasal quality because of pharyngeal weakness. The severity of the disease tends to fluctuate, and all cases must be managed very carefully, because the disease may suddenly become much worse. Approximately ten per cent of patients with myasthenia gravis have tumors of the thymus, some of which are malignant. Removal of a tumor may or may not affect the course of the disease. Neostigmine bromide is still the drug of choice and the dosage required for maximal improvement must be adjusted according to individual needs and may vary from 60 to 360 mg in twenty-four hours. Its effect is short lasting, three hours or less, and the medication is repeated at three-or four-hour intervals.

MUMPS

Aureomycin, Chloramphenicol And Terramycin In Mumps

Sutliff, W. D. & Barnes, Z. B., A. M. A. Arch. Int. Med. 91:68, 1953

Favorable but qualified reports have appeared concerning the use of aureomycin, Chloromycetin and Terramycin in treatment of mumps. Sutliff and Barnes found these antibiotics of no value in this condition. "Aureomycin, chloramphenicol and oxytetracycline (Terramycin) had no favorable effect upon the symptoms of mumps orchitis and . . . [we] conclude generally that the antibiotics were without effect in the treatment of mumps."

Clinical Clippings, April, 1953.

ACNE

The Cholesterol Content And Iodine Number Of Human Sebum

Washburn, S. L. & Liese, G. J., J. Lab. & Clin. Med. 41:199, 1953

The role of sebum as a causative factor in acne has been recently emphasized.* From this study it is evident that the cholesterol content of sebum drops sharply at puberty but no chemical or physical alterations could be detected in the sebum of sebaceous plugs which might be significantly related to the pathogenesis of acne. The authors state that lipid comprises only about 25 per cent of the dry weight of sebaceous plugs, which "leads us to de-emphasize the role of lipid changes in the pathogenesis of sebaceous gland plugging."

**Clinical Clippings, April, 1953.*

Clinical Clippings, May, 1953.

AMA Television Series Used by El Paso Society

The El Paso County Medical Society was one of the first in the Southwest to arrange for showings of the entire series of television films recently released by the American Medicine Association.

An excellent response to the films was reported by the station, KTSM-TV. The films, available through the AMA, are "Operation Herbert", "Your Doctor", "A Citizen Participates", and the "What To Do series.

DERMATOLOGY

Effects Of The Resin Of Euphorbia On Verrucae Plantaris

Goldblum, R. W. & Curtis, A. C., J. Invest. Dermatol. 20:45, 1953

Sixty patients with verrucae plantaris were treated by local application of a 30 per cent solution of euphorbia resin in 95 per cent alcohol. The central keratotic area was completely removed in all patients within 96 hours.* After paring the wart the euphorbia solution was applied to the central portion. The area was covered with tape which was left in place for 48 hours. The procedure was then repeated. A third application was required in a few patients. Local application of euphorbia solution caused a sharp burning sensation but no other skin reactions were produced.

[**It is interesting to note that radiation therapy of verrucae plantaris is successful in about 70 per cent of cases.*]

Clinical Clippings, May, 1953.

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